

FOR SERIOUS GROWERS: ORCHIDS IN THE BASEMENT

You know you are serious when you begin to imagine an orchid jungle in the basement with *Cattleya* and other sun-loving orchids in bloom! The secret is high-intensity discharge (HID) lights developed especially for growing plants.

WHAT YOU'LL NEED

- An HID fixture of at least 400 watts to illuminate a growing area of 9-12 sq. feet. The higher the wattage, the wider range of orchids you can grow and bloom.
- To increase the size of your orchid garden, simply increase the wattage or number of fixtures.
- Set your plants on benches or tables below the fixture with 'High' light orchids centered under the light and 'Low' light orchids placed towards the edges.
- Lights should be on for 12-14 hours each day. A timer can be used to regulate the duration.
- Maintain humidity by enclosing the growing area with plastic sheeting, and run a humidifier 24 hours a day.
- Use fans to circulate the air within the growing area and to exchange the air with the surrounding basement. Most orchid growers find they need at least two or more fans to achieve this necessary air movement. The fan for moving the air in and out of the growing space will assist in dispersing the heat generated by the HID lights.

SUGGESTED ORCHIDS TO GROW

Both the light intensity and temperature range in your growing space will determine what orchids you can grow and bloom. Consult other basement orchid growers in your area to learn what works best.

Light: 'High' light orchids such as *Cattleya*, *Dendrobium*, or *Vanda* will require a 1000-watt fixture to grow and bloom well. A 400-watt fixture will allow you to bloom 'Medium' light or 'Low' light orchids nicely.

Temperature: Artificial light conditions usually provide intermediate to warm temperature ranges. In choosing your orchids, refer to the chart below. Nighttime temperatures can frequently be the most challenging to provide, so choose your orchids by that factor first.

Category	Day Temperature (°F)	Night Temperature (°F)
Cool	60-70	50-55
Intermediate	65-75	55-65
Warm	75-85	65-70

TIP

There are two types of bulbs used in HID fixtures: metal halide and sodium. These bulbs produce different light spectrums. While either can be used to grow orchids, your plants will do best under metal halide bulbs. Sodium lamps were developed to extend the day length in commercial greenhouses and provide a more limited spectrum.

Your local orchid society is usually the best place to gain important information on which varieties do well in your area. For more information visit the National Capital Orchid Society at www.ncos.us. The information on these signs can be downloaded from www.usbg.gov.